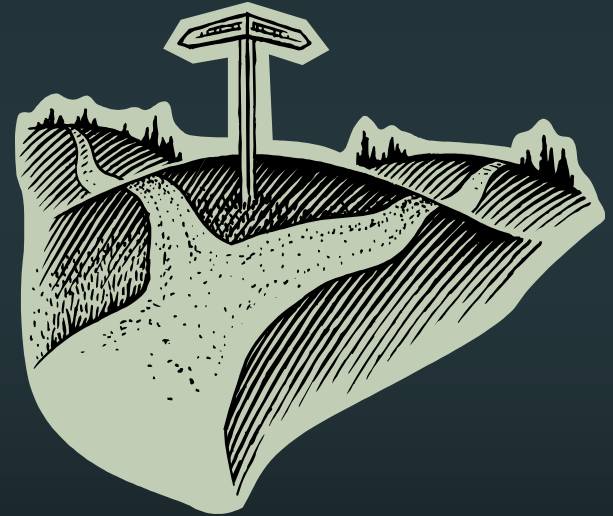


# Waukesha County Recycling

## *Looking Ahead*

Perry Lindquist, Land Resources Manager  
Waukesha County Dept. of Parks & Land Use



June 2013

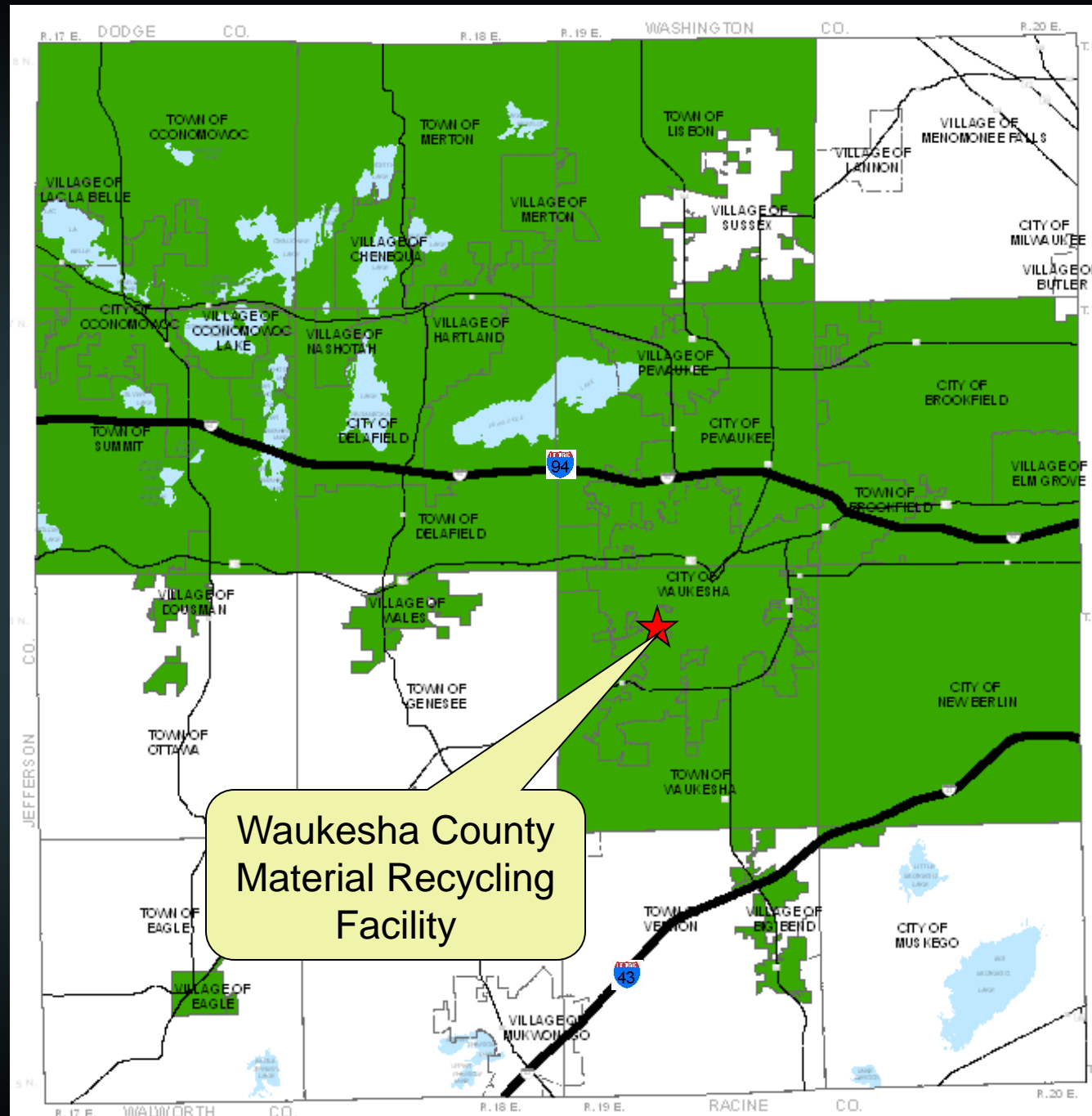
# Presentation Outline

- Background on current county recycling program/ Material Recycling Facility (MRF)
- Review of MRF studies & conclusions
  - 2007 Waukesha Co. MRF study
  - 2009 City of Milwaukee MRF study
  - 2010/11 Milwaukee MRF data (value/repairs)
  - 2010 Waukesha Co. Transportation study
  - 2012 Milw./Wauk. Co. Regional MRF study
- Implementing the recommendations

# Background on County Program

- Waukesha County is “Responsible Unit” for 25 of 37 communities (since 1990)
  - Co. took the risk of investing in MRF/no tipping fee to communities
  - Co. receives state grant funds on behalf of 25 communities
  - Co. oversees MRF operation & building maintenance
  - Co. leads/coordinates recycling education program
  - Co. pays for blue recycling bins (used by 22/25 communities)
- County-owned/privately operated MRF
  - Dual-stream system (paper & containers separate)
  - Average 22,000 tons/year of recyclables
  - Very competitive for private operators
  - Last expansion in 1995

# 25 Municipalities in the Waukesha County Recycling Program





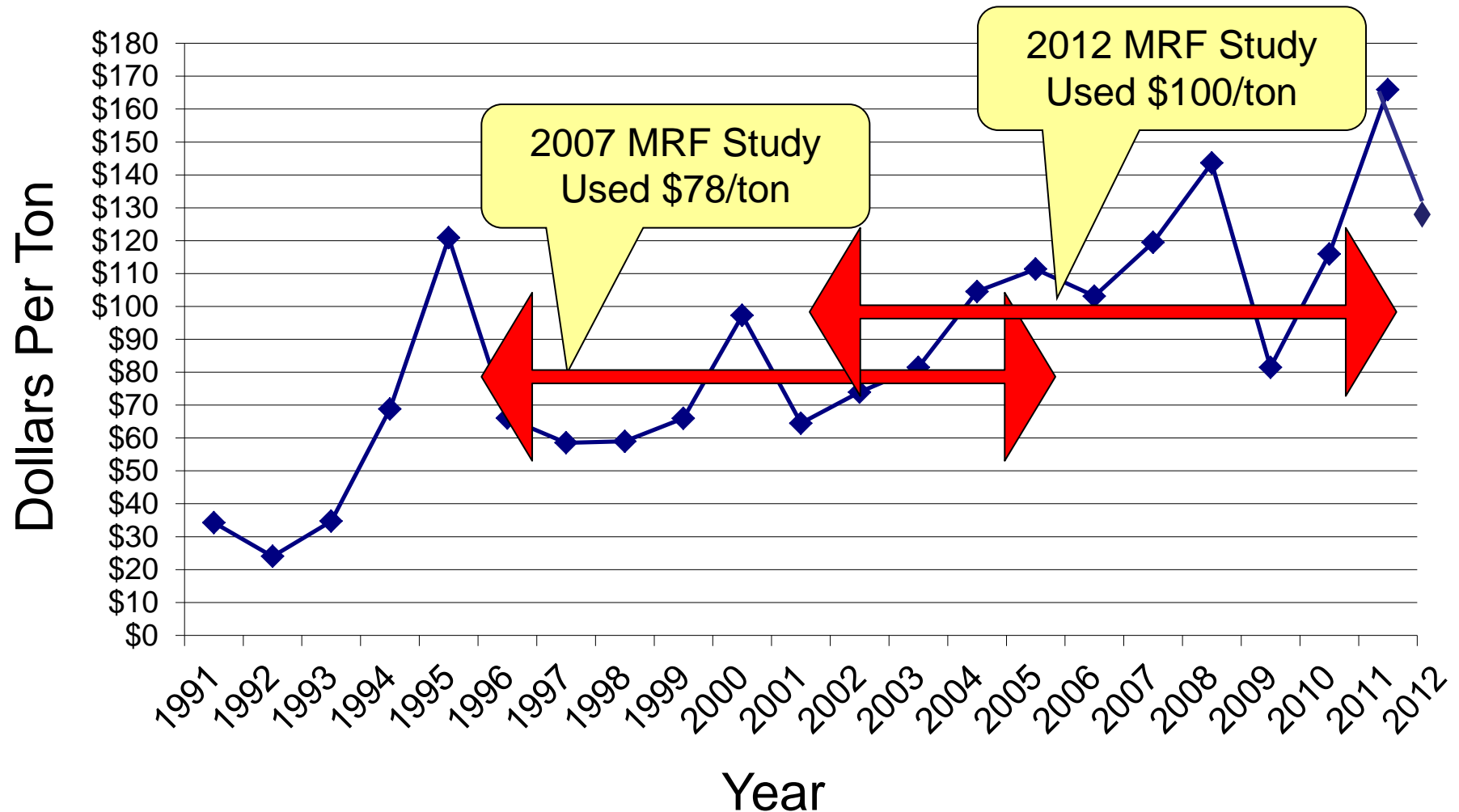
# Background on County Program

*(continued)*

- 25 Participating Communities must:
  - Collect dual stream recyclables – 2012 Data:
    - 89,300 households (pop. 270,000)
    - \$11.4 million/yr. in private contracts (\$3.6 mil. recycle)
  - Deliver recyclables to county MRF
  - Report program costs to county/annual grants

# Total Revenue Per Ton Shipped

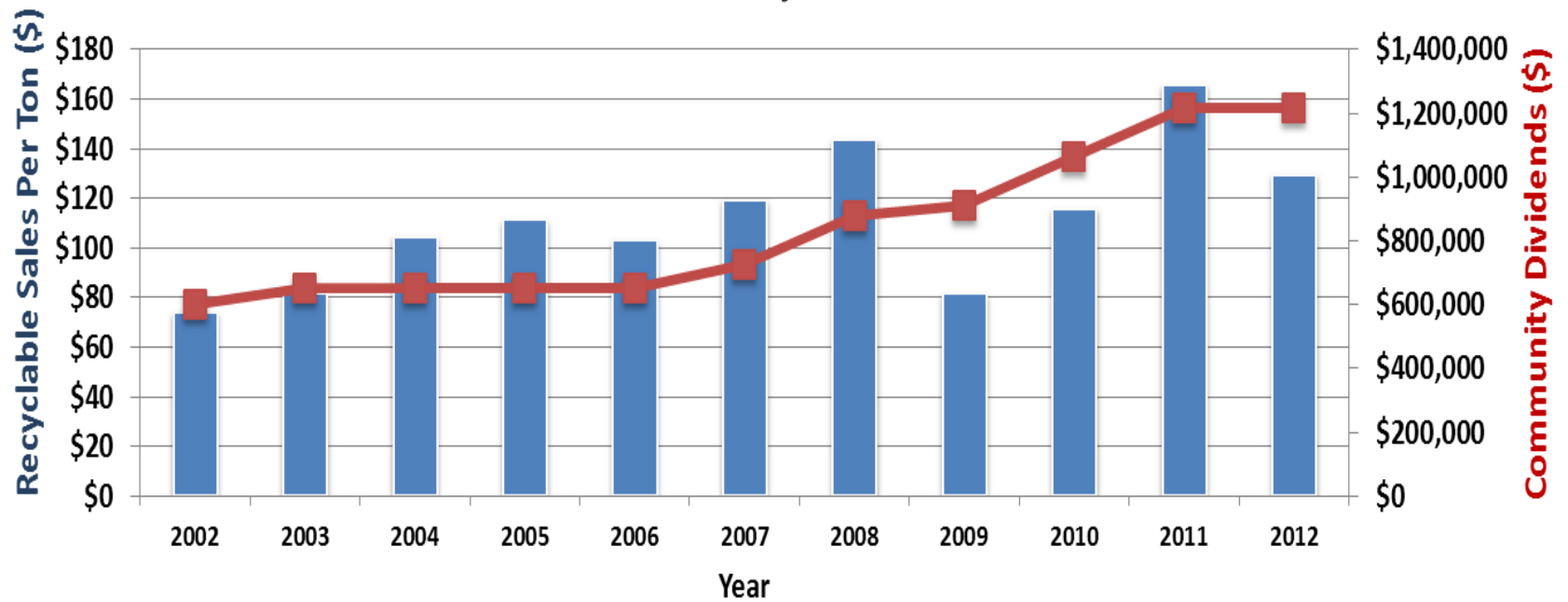
## Waukesha County MRF 1991-2011



# MRF Enterprise Fund

- Self-sustaining – no tax levy or processing fees
  - Up front county loan paid off (risk)
- Revenues:
  - Material sales (currently 50%)
  - State grants (approx. \$1 million/yr.)
  - Operator processing fees (recent: up to \$6.50/ton)
- Available fund balance approx. \$14 million
  - Good markets and competitive operating contracts
  - Community dividends of \$11 million in the last 13 years
    - Recent dividends cover about 1/3 of community collection \$
  - Use fund balance to pay for future MRF investments

## Recyclable Sales Vs. Community Dividends Waukesha County MRF 2002-2012



# 2007 MRF Study

- Can handle future dual stream program for the short term, however:
- Major issues need to be addressed:
  - Container sort line
  - Tipping floor
  - Bale storage
- All require space



**Must expand MRF or build new in future**

# Plastic Containers Overwhelming Sort System





# Tipping Floor Space Limited



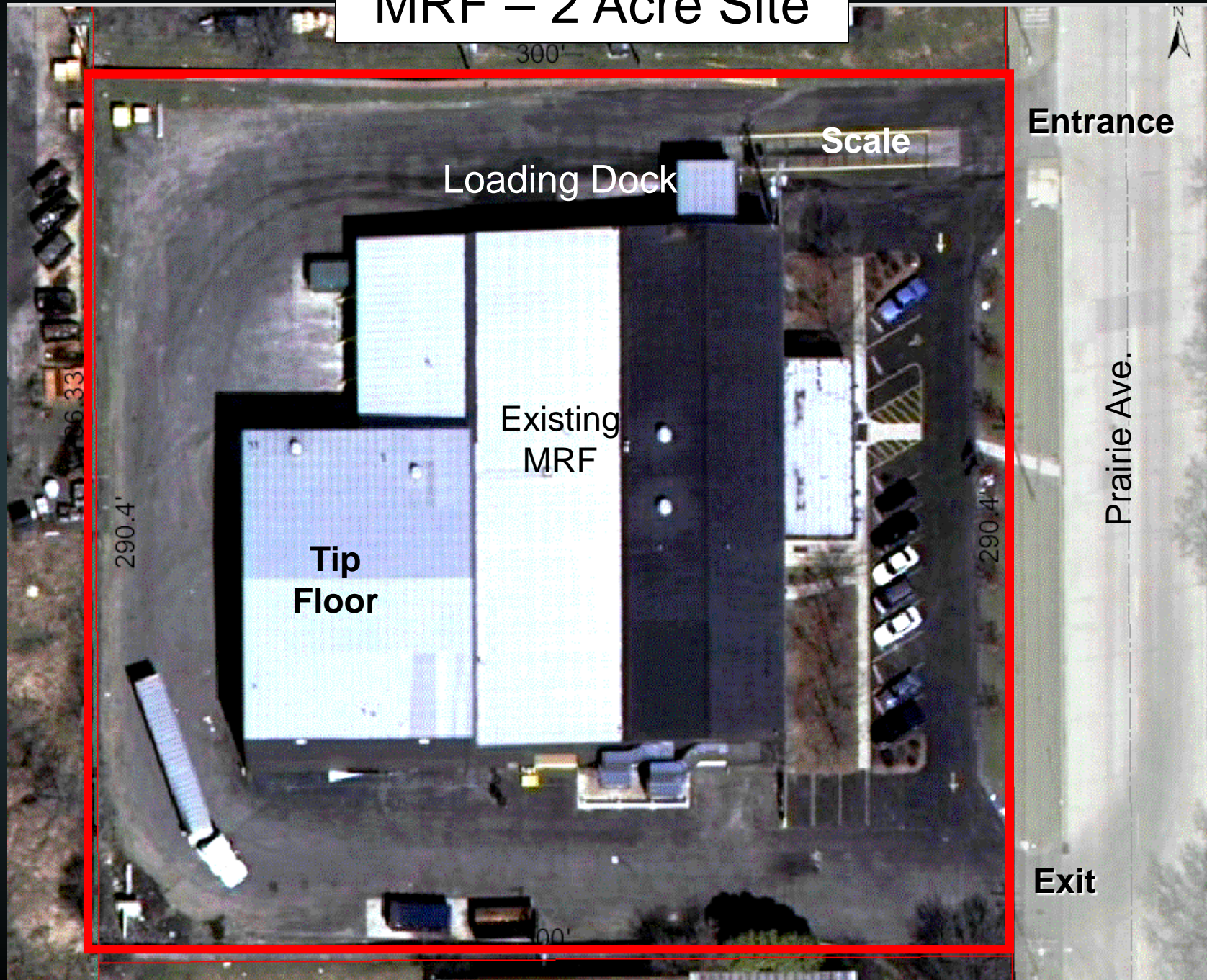


# Bales Storage is Inadequate





# MRF – 2 Acre Site

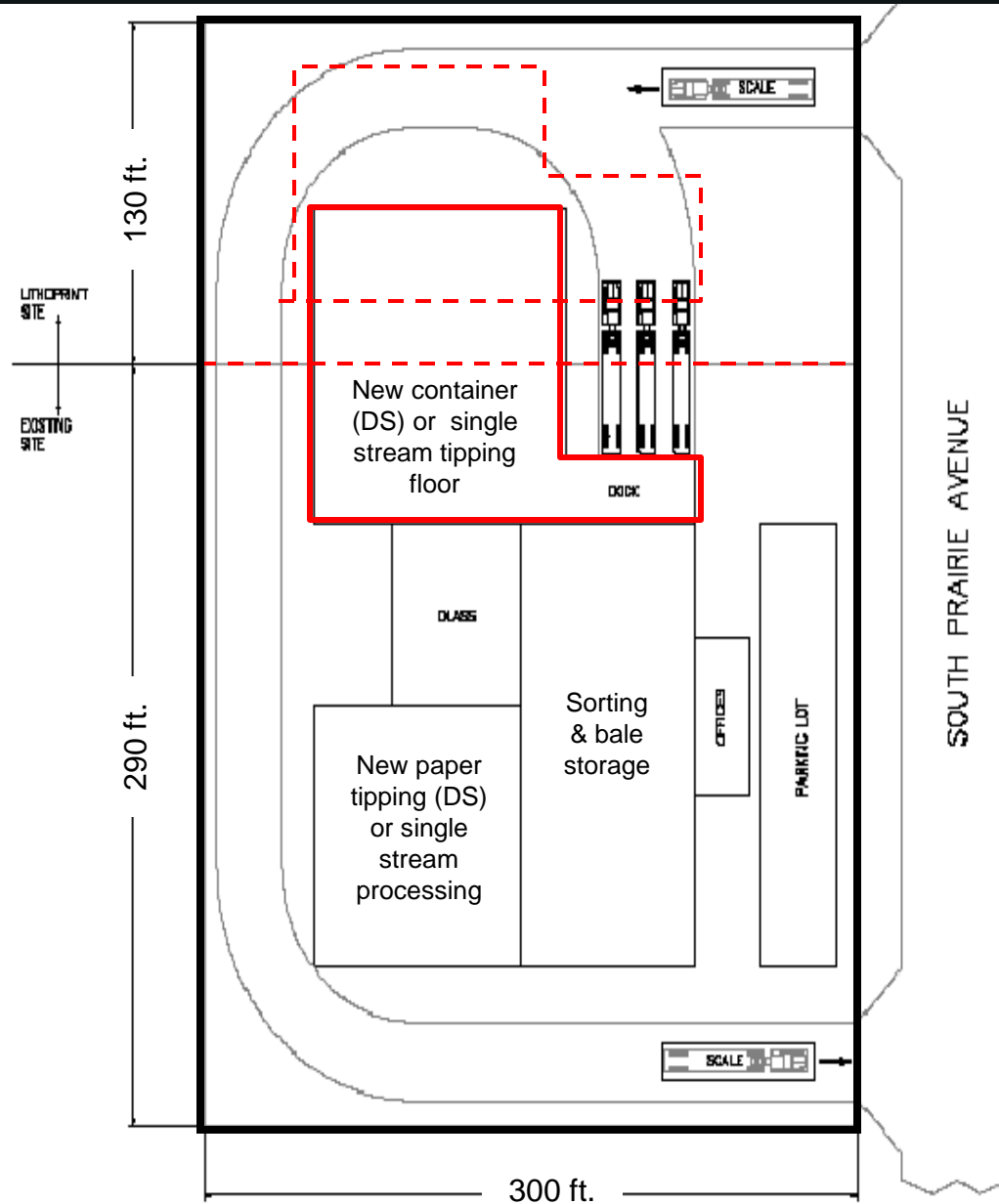


# MRF Expansion Options Limited

- If 1 acre site to the north purchased, limited expansion is possible
- Expanded MRF cost= \$6.5 million + property + business relocation costs (dual stream)
- Single stream expansion=\$7 million + property + business relocation costs

# Concept Drawing – North Expansion

(single or dual stream)





# Recyclables Collection

## *Dual Stream vs. Single Stream*



**Existing program (blue bin)**

(manual/paper & containers separated)



**Industry trend (cart)**

(automated/all recyclables mixed)

# Industry Trend on Collection

- Automation
- Large carts
- Sort by:
  - Trash
  - Recycling (SS)
  - Yard waste



# Single Stream Recycling

## Pros (Collection) vs. Cons (MRF Impacts)

Single Stream Collection	Single Stream MRF Impacts
<ul style="list-style-type: none"> <li>Automation decreases personnel costs (workers comp claims, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Increases MRF labor and capital costs</li> <li>Automation of processing/higher tons/hr.</li> </ul>
<ul style="list-style-type: none"> <li>Large cart allows <b>Every Other Week collection of recyclables</b> / Cart costs</li> </ul>	<ul style="list-style-type: none"> <li>Increases residue level at MRF (non-recyclables)</li> </ul>
<ul style="list-style-type: none"> <li>More households per route – faster collection, can use compaction vehicles to reduce capital &amp; trips to the MRF</li> </ul>	<ul style="list-style-type: none"> <li>Potential for decreased quality of processed paper (glass shards/now OK)</li> </ul>
<ul style="list-style-type: none"> <li>Higher rates of recycling – easier for the general public to implement (one large cart)</li> </ul>	<ul style="list-style-type: none"> <li><b>Higher recyclable volumes to process</b></li> <li>Increased net cost per ton processing</li> </ul>

All of these factors were built into the economic analysis



# Collection Trends

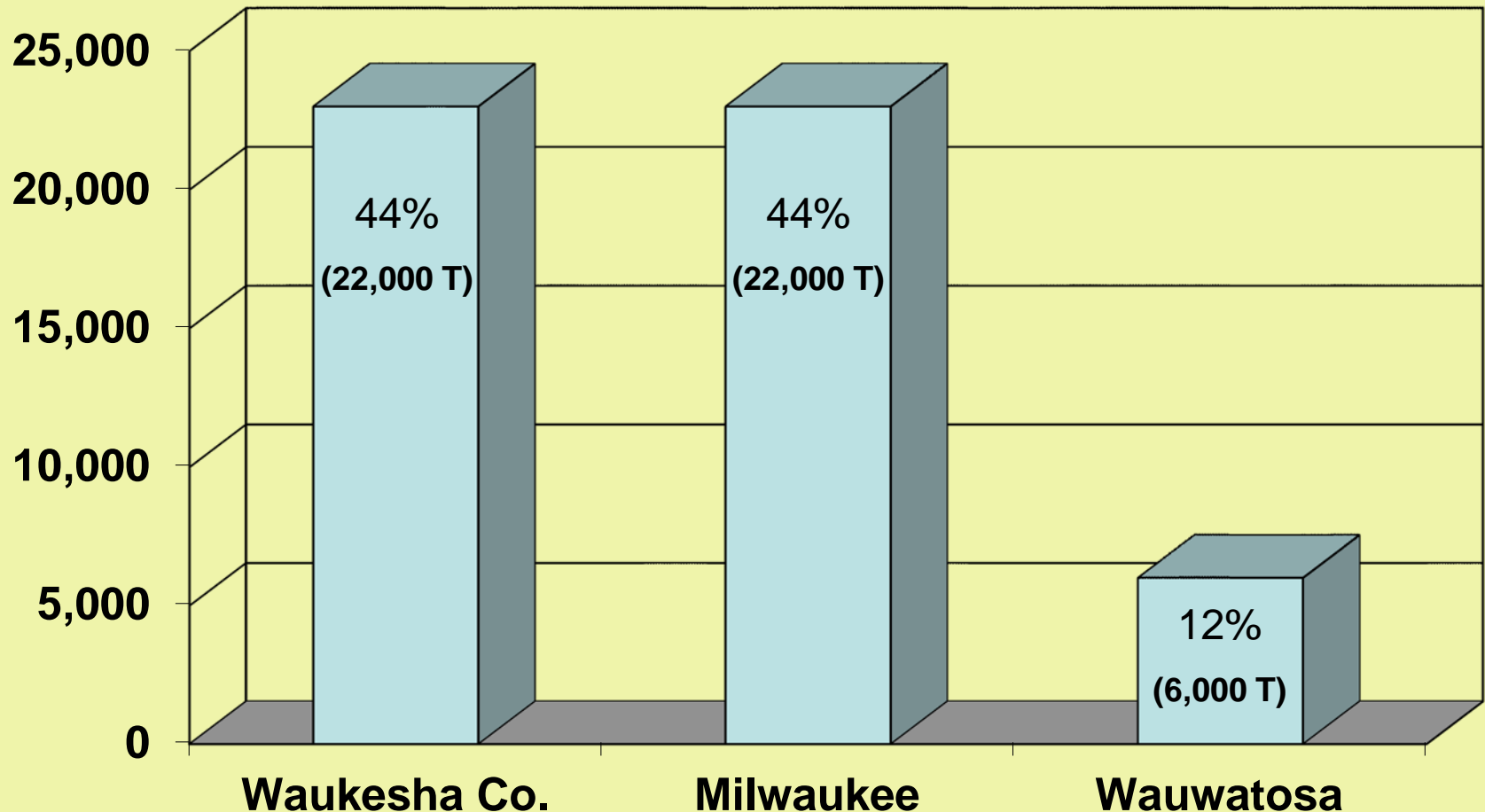
- Haulers are switching to Single Stream / Save \$
  - Trend is playing out nationwide (>50% SS MRFs)
  - Locally, only 1 of 3 private haulers still offers dual stream collection:
    - Waste Mgt. - large single stream MRF in Germantown
    - Johns Disposal - single stream MRF in Norway (Racine Co.)
    - Veolia/ADS - has all 25 local collection contracts (largest)
- Lack of competition on community collection bids
  - Potential to save \$ on collection & disposal costs with single stream

# Scenarios for Future Projections:

- Tonnage
  - Participating county municipalities (25)
  - Adding more tonnage (Milwaukee & Tosa)
- Single vs. Dual Stream (system)
- Market variables



# Annual Tons Recycled (50,000 Tons)\*



\*Rounded from 2010 data (no other communities included with City of Milwaukee data)



[illegible]

# Key Findings & Recommendations

## 2007 MRF Study

1. Switching to Single Stream is strongly recommended
  - Pros far outweigh the cons
  - Could save partic. communities \$1 million/year in collection & disposal costs (carts = \$300k)
2. Recycling tons increase considerably with a Single Stream system – assumed + 25%
  - In-county data shows 45% increase/capita



# Key Study Findings & Recommendations

*(continued)*

## 3. Doubling tonnage greatly improves the economics of Single Stream

- 10 times faster return on investment (2 shifts)

*Note: 5-year capital payback vs. 58 years (NET: \$0.12 vs. \$1.7 million/yr.)*

## 4. National MRF data shows:

- SS paper/fiber is equally marketable
- Increased residue from SS depends on public education, collection system & processing (projected increase from 3% to 10%)

# Single Stream Options

*(2007 Costs & 2010 Projected Tonnage)*

## 1. **Expand/Convert Current MRF:**

- Est. costs = \$7-8 million / NET= \$0.12 million/yr.

## 2. **Build New Regional MRF (publicly-owned/private operated):**

- Est. costs = \$8-9 million / NET = \$1.7 million/yr.

## 3. **Send recyclables to privately-owned MRF**

- Costs unknown (RFP)/will vary over time

**It's all about the tons!**



# Recycling Program Similarities: Waukesha County & City of Milwaukee

- Publicly-owned/private oper. dual stream MRFs
- Tonnage processed (22,000/yr.)
- Aging facilities facing costly updates
- Pressures to improve program efficiencies
- Pressures to switch to Single Stream:
  - Reduce collection & landfill disposal costs
  - + Increase recycling rate
- Concerns about future price stability
- 15-year history of coordinating education efforts

# Milwaukee Recycling Study 2009

Recommended to switch to single stream:

1. Convert existing Milwaukee MRF to transfer station – haul to “3<sup>rd</sup> party” SS facility; or
2. Convert existing Milwaukee MRF to single stream and partner with Waukesha Co.

Notes:

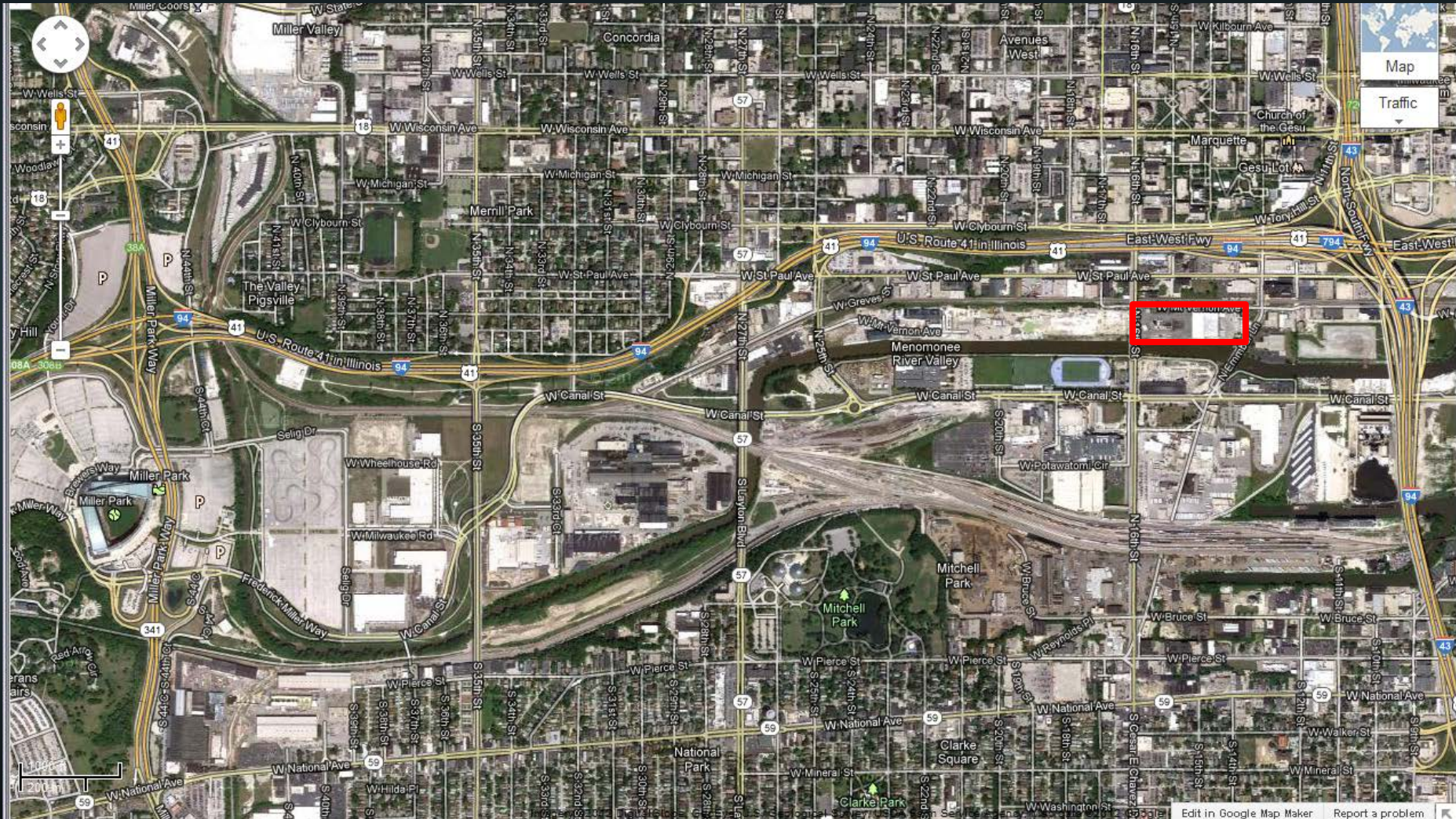
- Ruled out Tosa MRF site due to high capital costs (\$ 6 million for new building)
- Projected costs for a new regional MRF were \$10 million vs. \$8.25 + land in 2007 study (new data)

# Milwaukee MRF Data

- 7.69 acre site along Menomonee River
  - \$615,000 value (2011 appraisal)
- 75,000 sq. ft. building
  - \$ 1.7 million value (2011 appraisal)
- MRF 2010 condition report: (Poor)
  - Needs \$2.16 million in maintenance/upgrades
  - Current replacement value: \$3.2 million
- Site 2010 condition report:
  - Needs \$2.35 million in maintenance/upgrades



# Milwaukee MRF Location





# Milwaukee MRF Site (7.69 acres)





# Milwaukee MRF





# Milwaukee MRF Tipping Floor





# Milwaukee MRF – Processing Area





# 2010 Transportation Study

## (Waukesha County)

Three options for regional MRF:

1. Direct haul all recyclables to Milwaukee MRF by municipalities
2. Build new regional MRF in New Berlin (ideal location)
3. Convert Waukesha MRF to a transfer station and haul compacted trailers to Milw. MRF



# 2010 Transportation Study - Results

## NET Present worth system analysis\*

1. Direct haul to Milwaukee MRF: **\$4.87 million**
  - Cons: Municipalities pay \$183,000/year more in hauling/traffic
2. New Berlin MRF: **\$4.1 million (-\$67K/yr.)**
  - Cons:
    - \$6 million more capital costs for new bldg. vs. use of existing Milw. MRF
    - Increased transfer O&M/hauling costs for Milwaukee
    - Increased municipal hauling costs of \$31,000/year
3. Wauk. Transfer Station: **\$3.76 million (-\$96K/yr.)**
  - \$481,000 capital + \$300,000/yr. O&M/Co. hauling (\$13/ton)
  - Pros: Same municipal hauling costs, flexible hours, control of product stream, verify municipal tonnage

\* NET present worth includes system costs and revenues. All capital costs assumed 15-year @ 3.5% interest.

# 2012 Regional MRF Study Scope

## (Milwaukee & Waukesha County)

- Update processed tonnage, single stream upgrade costs & revenue estimates
- Evaluate existing MRFs in region & estimate costs for processing materials at a private MRF
- Preliminary Regional MRF Layout (Milw. MRF)
- Prepare preliminary business plan/present worth analysis for a MRF partnership
  - Allocation of costs and revenues/possible 3<sup>rd</sup> party mat.



# Regional MRF Quantities

## A. City of Milwaukee

- Current: 23,800 tons/year
- Increase 4% for Single Stream
- Increase 10% 3-2 Week Pickup
- Design: 27,100 tons/year

## B. Waukesha County

- Current: 22,000 tons/year
- Increase 25% for Single Stream
- Design: 27,500 tons/year



# Regional MRF Quantities (cont.)

## C. Potential Third Party Tonnage

- 6,000 tons/year - Wauwatosa
  - Veolia/others? (allow for shift changes later)
- Include 6,000 tons in MRF Design Capacity



# Regional MRF Design Capacity

- A. City of Milwaukee: 27,100 tons/year
- B. Waukesha County: 27,500 tons/year
- C. Third Party: 6,000 tons/year
- Total: 60,600 tons/year

2080 hrs./yr. = 29.1 tons/hour

Design for 30 tons/hour



# Existing MRFs in Region

1. Waukesha County
2. City of Milwaukee
3. Waste Management – Germantown (SS)
  - ✓ Has capacity now
4. Johns Disposal – Norway
  - ✓ Would need to add shifts



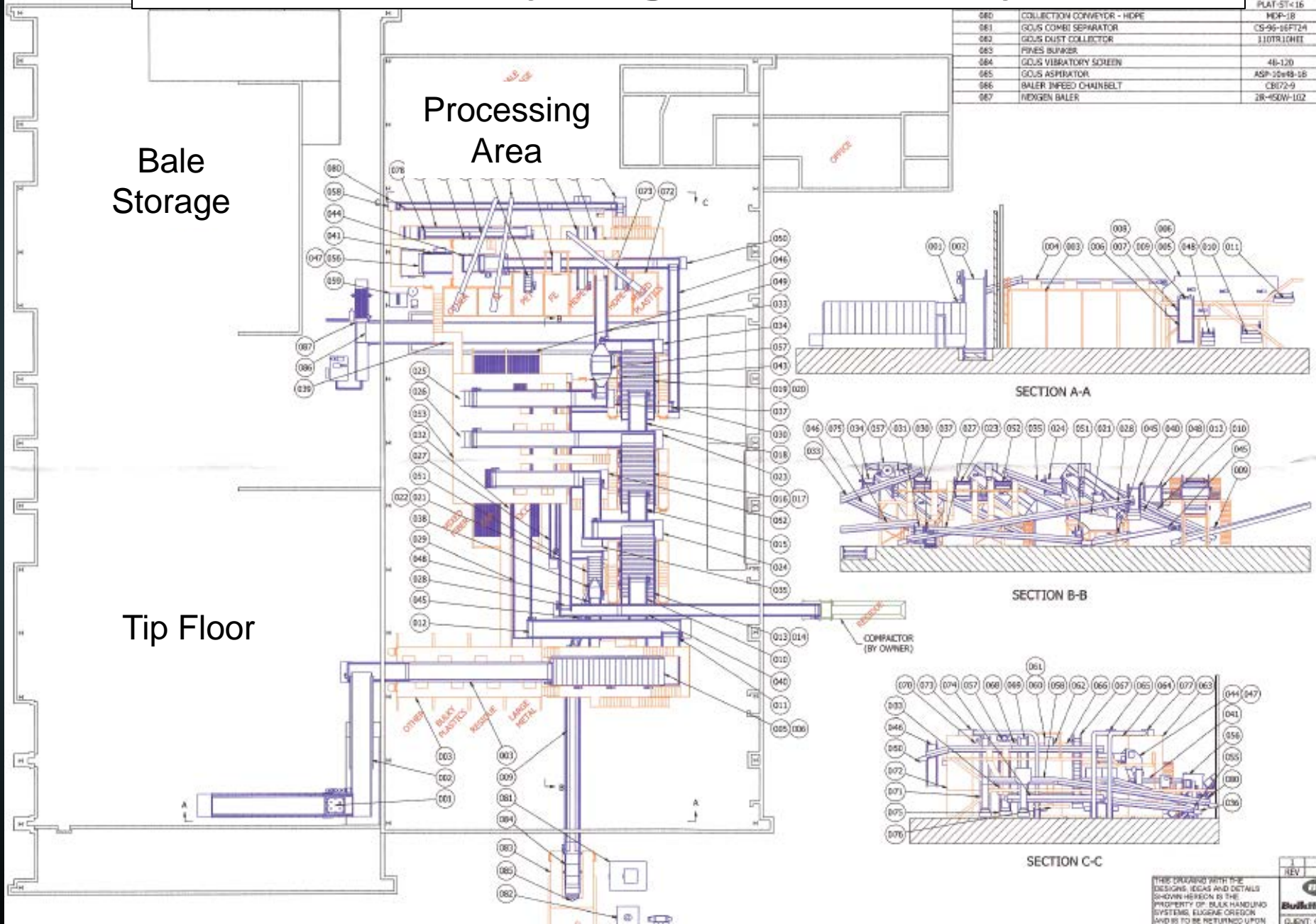


# Regional Milwaukee MRF Single Stream Processing

- Equipment est.: \$10 million
  - Range: \$9.1 to \$11.8 million
  - 30 tons per hour processing
  - One train (processing line)
- Processing O&M cost estimate: \$30/ton



# Preliminary Regional MRF Layout



THIS DRAWING WITH THE  
DESIGNS, IDEAS AND DETAILS  
SHOWN HEREON IS THE  
PROPERTY OF BULK HANDLING  
SYSTEMS, LLC. NO PART  
HEREOF IS TO BE REPRODUCED OR  
TRANSMITTED IN ANY FORM OR  
BY ANY MEANS, ELECTRONIC OR  
MECHANICAL, INCLUDING  
PHOTOCOPYING, RECORDING, OR  
BY ANY INFORMATION STORAGE  
AND RETRIEVAL SYSTEM, WITHOUT  
THE WRITTEN PERMISSION OF  
BULK HANDLING SYSTEMS, LLC.

# MRF Building/Grounds Upgrades

## Costs Allocated to Milwaukee

- Based on 2010 Facility Condition Assessment Report (Milw. MRF)
- MRF Repairs: roof, sprinkler system, HVAC, doors, lighting, paint/frame
- Grounds repairs: pavement, storm water, fencing
- Not included: drivers lounge, sea wall replacement
- \$3,150,000 Allocated to City of Milwaukee





# Waukesha Transfer Station

## Costs Allocated to Waukesha County

- Convert MRF for Compactor: \$157,000
- Annual O&M/Hauling Costs: \$414,000/year
  - Based on \$18.82/ton
  - 22,000 tons/yr. (80%)

Note changes in 2010 \$\$





# Regional MRF Revenues

(Partners: Milwaukee & Waukesha Co.)

- Material sales: \$100/ton
  - Assume Revenue Sharing of 80%/20% (Partners/Operator)
- Third party (Tosa, etc.) assume:
  - \$30/ton processing fee to Partners
  - \$16/ton capital charge to Partners
  - 16% (20% of 80%) sales revenue to Partners
    - 64% (80% of 80%) to Operator



Saved \$40/ton  
in landfill fees

# Costs & Revenue Summary

## Regional MRF

(54,000 tons/year for Waukesha Co. & Milwaukee)	Waukesha County	City of Milwaukee
<b>Capital Costs (one time)</b>		
<b>MRF Building/Grounds Improvements</b>	<b>\$0</b>	<b>-\$3,150,000</b>
<b>MRF Equipment Capital Cost (\$10 million)</b>	<b>-\$5,000,000</b>	<b>-\$5,000,000</b>
<b>Transfer Station Capital Costs</b>	<b>-\$160,000</b>	<b>\$0</b>
<b>Annual Operation &amp; Maintenance Costs</b>		
<b>MRF O&amp;M Costs (\$30/ton)</b>	<b>-\$810,000</b>	<b>-\$810,000</b>
<b>Transfer Station O&amp;M / Hauling Costs (\$19/ton)</b>	<b>\$410,000</b>	<b>\$0</b>
<b>Capital reserve – equipment replacement (\$6/T)</b>	<b>\$162,000</b>	<b>\$162,000</b>
<b>Annual Revenue</b>		
<b>Recyclable sales – Milw. &amp; Wauk. Co. (\$80/ton)</b>	<b>\$2,160,000</b>	<b>\$2,160,000</b>

# 15-Year Fiscal Analysis

	Waukesha County	City of Milwaukee
Total Capital Costs (15 yrs. @ 3.5% interest)	-\$6,720,000	-\$10,614,000
Total Annual Costs (15 yrs.)	-\$20,736,000	-\$14,580,000
Total Annual Revenue (15 yrs.)	\$32,400,000	\$32,400,000
	<b>NET Present Worth</b>	<b>\$4,944,000</b>
		<b>\$7,206,000</b>

- No building value/costs/rental included for use of Milwaukee MRF building
- Assumed: same City & County tonnage/no state grants/no 3<sup>rd</sup> party tonnage
- Reminder: 2012 recyclable collection costs = \$3,641,000



# 2012 Study Conclusions

1. Regional Publically-owned MRF for Milwaukee and Waukesha County is cost-effective
2. Provides competition and controls costs and revenue
3. Recycling revenue is shared with private MRF operator
4. Potential for third party customers
5. Privately owned MRFs in region are also available and are an option



# 2012 Study Recommendations

- City of Milwaukee and Waukesha County should develop an agreement for a Regional SS MRF
- If agreement cannot be reached, further explore option to ship materials to privately-owned SS MRF



# Public vs. Private MRF?

- Recycling is taxpayer funded
  - Community collection contracts (\$3.5 million/yr.)
- County MRF operation is already privatized
  - Incentives for efficiency & marketing (50% share)
  - Very good competition on operating contracts
- Public/private partnership has been successful
  - \$11 million in community dividend payments
  - Helps offset community collection costs (1/3 costs)
  - Helps control costs for other communities in the SE
- Privately-owned MRF does not ensure long-term price stability/revenue for communities



# Why Work with Milwaukee?

## *(Regional Single Stream MRF)*

1. Both MRFs outdated/need switch to SS
2. We need each others tonnage to:
  - Lower costs/ton - capital and O & M
  - Better return on investments/reduced risk
  - Stabilize prices long-term (regionally)
3. Good example of intergovern. cooperation
4. Both MRFs already publicly-owned and privately operated
  - No threat to private sector



# Steps to Making a Decision

- Agreement with Milwaukee - February 2013
  - Joint consultant contract (RRS) / RFP process
- RFP release in July 2013
  - Option A: Design/build/operate at Milwaukee MRF as a County/City Joint Venture
  - Option B: Allow private MRFs to bid on material or to build a new MRF
  - Proposals due September 2013
- Review proposals/determine best plan (\$)
- County Bd./City approval Oct./Nov. 2013
  - Goal to be operational July/Aug. 2014

# Outreach & Education

- Community meetings (June 24, etc.)
  - Collection contracts
  - Cart purchases
  - Transition plans
- Committee meetings (June 17, 18 & 19, etc.)
- Public education program (“single sort”)
  - Spring 2013 newsletter
  - Spring 2014 newsletter
  - Post cards/mailings
  - Media campaign



Questions?